THE SHADOW

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By Gary C. Crider

THE SHADOW is a file copy/disk reorganization utility for the 48K ATARI 800 Home Computer. It allows user friendly cursor selection of files to be copied. The outstanding features of THE SHADOW include:

A. Copying from single to double density and vice-versa on a single or multiple disk drive system.
B. Full buffer copying. THE SHADOW completely fills all available storage in the ATARI 800 with as many files or portions of files as possible before beginning a write pass to the destination disk. This minimizes disk swapping for the single drive user.
C. You can always see which file is being read into the buffer or written from it at any given time.
D. The disk format feature of THE SHADOW will mark any unformattable sectors as allocated so that DOS will not attempt to use them. This will allow ATARI 810 users to utilize diskettes that may be partially damaged. There is no need to discard a disk if only a few sectors are bad. The ATR 8000 does not return bad sector information from the format Command for slave drives attached to it, but the 810 does. I am unsure about the RANA, TRAK, INDUS GT and other new intelligent drive systems. Most if not all do not return the necessary information.
E. Cloning of DOS.SYS. Most copy utilities at the dataset level do not allow copying of DOS.SYS and instead require the use of a DUP.SYS function or equivalent to write DOS to a destination disk. This is due to some fields in the boot sectors (sectors 1-3) which must be updated whenever DOS.SYS is written or renamed. Those utilities that do allow copying of DOS.SYS generally just write the resident DOS from memory. THE SHADOW will make an exact Copy of the DOS.SYS on the source disk to the destination. Including all options such as verify-after-write, maximum open file count and drive allocations, which you may have set for that particular DOS. Thus if THE SHADOW is running under OS/A+ and ATARI DOS 2.0S is on the source disk and DOS.SYS is selected

to be copied, the destination will contain DOS 2.0S after the copy. THE SHADOW will copy any DOS or modified DOS that uses only three boot sectors and has the buffer and drive allocation bytes in the same location in sector 1 as ATARI DOS 2.0S. This includes OS/A+ Version 2, MYDOS, K-DOS, and DOS/XL. The only commercially available DOS I know of that THE SHADOW will not clone is OS/A+ Version 4.

THE SHADOW will not function properly when booted up under MYDOS, OS/A+ Version 4 or SMARTDOS.I am not sure about K-DOS.

OPERATING INSTRUCTIONS

Use of THE SHADOW is self-explanatory except for a few conditions. These are outlined below:

A. Entering source and destination drive numbers and densities as in the following examples:
   1,2 - Copies from drive one to drive two;
   1,1 - Single drive copy using drive 1;
   S,D - Single density source to double density destination.
   Defaults are 1,1 and S,S or the response entered on previous execution.
B. Exiting THE SHADOW is done by hitting the ESCAPE or BREAK key depending on the stage of processing. You will then be given the options of pressing SYSTEM RESET to reboot the disk in drive 1, pressing OPTION to exit to DOS, or pressing START to rerun THE SHADOW. When running under OS/A+ version 2 or DOS/XL control can be returned to THE SHADOW after exiting to DOS by typing the RUN command. This assumes you have loaded no other programs on top of THE SHADOW.
C. I/O errors will return a message with the error number followed by the options described under "Exiting THE SHADOW. All open files will have been closed to maintain the Integrity of your disk files.

CAUTION - Do not abort the copy operation while the program is waiting for a source/destination disk swap by simply removing the disk. This could leave an open output file on your disk and cause those sectors occupied by the partial file to be lost to DOS. The

same results may occur if you press SYSTEM RESET during the Copy phase. This condition will usually be intercepted however, and the files closed. A better way to abort is to press the BREAK key repeatedly until the “I/O Error-128" message appears.

NOTE- If you don't want the keyboard to buzz when a disk needs to be swapped or at end of copy, place any non-zero value in the seventh byte of the first sector of the program using a sector editor.

PROBLEMS CORRECTED BY VERSION 1.0.l

1. When THE SHADOW reinitialized the DOS drive tables and buffer allocations before requesting insertion of the destination disk at the start of processing, it sometimes took a long time (5-6 seconds) to complete. I think I have taken care of the problem.
2. When formatting the destination drive in double density with the ATR8000 interface, the message "The Following SECTORS MARKED BAD:” would appear with no sector numbers following it. It would then wait for a key to be pressed before displaying the file select menu. In actuality, there was nothing wrong with the destination format. This has been corrected.
3. Cloning DOS.SYS was not always reliable. This was especially true for MYDOS and some modified DOS.SYS files. THE SHADOW will now copy all DOS.SYS files that meet the criteria described earlier.

PROBLEMS CORRECTED BY VERSION 1.0.2

1. Under previous versions of THE SHADOW, formatting in double density on the INDUS GT disk drive caused the program to stop while writing the boot sectors after the format was Complete. This has now been corrected.
2. For the sake of convenience, the defaults for drive selection and densities will select the same parameters as were last selected (when you just press RETURN). This facilitates multiple copying. For safety's sake you must still specify Y if you want to format, regardless of previous runs.

PROBLEMS CORRECTED BY VERSION 1.0.3

1. Garbage sometimes appeared on the screen during the Copy phase when using DOS/XL as the host System.
2. THE SHADOW did not always work properly when reentered from OS/A+ or DOS/XL using the RUN command.
3. The format function did not work properly on some PERCOM disk drives due to MY assumption that the directory sectors would be set to zero during formatting. THE SHADOW now zeros these sectors after formatting.
4. THE SHADOW would not compress Using CRIDER'S COMPRESSION SYSTEM (CCS) due to an ERROR 2.
5. THE SHADOW would not load properly from the CCS menu due to conflicts in CCS and THE SHADOW's internal relocation routine.

AFTERWORD

If you like this program, try DOS WIZARD (now handling double- density). DISASSEMBLER 6502 and FASTDUP (still the fastest sector by sector disk duplicator in most instances - single and double density). The price is right. They're free (almost). You don't even have to pirate them, but I would consider any resale of my programs for profit to be a violation of my copyright.

NEW!

If you would like to get another game or two on your game disk or save some of the costly disk space you use in backing up your library try Crider's Compression System. It comes complete with compressor, expander, and a load menu that will handle over 40 programs and run with any DOS. The Menu also loads and runs non-compressed programs.

SPECIAL OFFER!

If you would like the latest versions of all of the above mentioned utilities, send me a disk. Self addressed mailer and postage along with $5 to cover

copying costs and I will return the diskette with the programs and documentation files.

If you encounter difficulties with this or any of my Programs do not hesitate to call or to write. I don't guarantee a fix but maybe I can offer a little sympathy.

Gary C. Crider
1105 Burgess Ct.
Arlington, TX. 76015
(817) 467-1114

THE SHADOW was written as an example program for a Machine language class which I taught for the North Texas Atari Computer Team (NTACT). This explains some of the frills which are not generally necessary in a utility, such as the Multicolored file select screen using display list interrupts.

Special thanks to Pat Duran of Fort Worth, Texas for the name “THE SHADOW”.

A Bronx cheer to the members of my class, who were supposed to help but made me write the whole thing, you know who you are!